

*Stated Meeting, April 18.*

Present, twenty-one members.

Prof. FRAZER, Vice-President, in the Chair.

Letters were read:—

From John P. Brown, dated American Legation, Constantinople, Turkey, March 6, 1856, acknowledging the receipt of notice of his election as a member of the Society:—

From H. Bossange & Son, dated 25 Quai Voltaire, Paris, January, 1856, accompanying a donation for the library: and—

From Dr. Charles W. Short, dated near Louisville, Kentucky, April 5, 1856, giving reasons for not fulfilling his appointment by the Society to prepare an obituary notice of the late Mr. William Short, and requesting to be released from the duty assigned.

The following donations were announced:—

## FOR THE LIBRARY.

Annales des Mines. V. Série. Tome VII. 1 livraison de 1855. Paris. 8vo.—*From the Engineers of l'Ecole des Mines.*

Documents relating to the Colonial History of the State of New York, procured in Holland, England and France, by John Romeyn Brodhead, Agent, &c. Edited by E. B. O'Callaghan, M.D. Vol. VI. Albany, 1855. 4to.—*From the Regents of the University of the State of New York.*

Results of a Series of Meteorological Observations, made in obedience to instructions from the Regents of the University, at sundry Academies in the State of New York, from 1826 to 1850, inclusive. Compiled from the original returns, and the Annual Reports of the Regents of the University, by Franklin B. Hough, A.M. M.D. &c. &c. Albany, 1855. 4to.—*From the same.*

Sixty-ninth Annual Report of the Regents of the University of the State of New York: transmitted to the Legislature Jan. 15, 1856. Albany. 8vo.—*From the same.*

Annual Report of the Trustees of the New York State Library: transmitted to the Legislature January 22, 1856. Albany. 8vo.—*From the same.*

Journal of the Franklin Institute. Third Series. Vol. XXXI. No. 4.  
 April, 1856. Philadelphia. 8vo.—*From the Institute.*  
 Ma Bibliothèque Française. Paris. 12mo.—*From Hector Bossange  
 & Son.*

The Committee appointed at last meeting, on a communication by Dr. Hallowell, "On a New Genus of Boædæ from Cuba," reported in favour of its publication in the Transactions of the Society, which was ordered accordingly.

Judge Kane announced the decease of Thomas I. Wharton, Esq. a member of this Society, who died April 7, 1856, aged 65:—

And, on motion of Dr. Franklin Bache, Judge Kane was appointed to prepare an obituary notice of Mr. Wharton.

Mr. Durand made a communication concerning the collection of plants brought from the Arctic regions by the expedition under the command of Dr. Kane.

The collections of plants, brought by Dr. E. K. Kane, from his two voyages to the polar regions, comprehend 148 species—77 of which are dicotyledonous; 29 monocotyledonous, and 42 cryptogamous plants: all from the western coast of Greenland, between the 64th and 80th north parallels.

Although compelled, by the casualties of his voyage back to the United States, to sacrifice several of his packages, Dr. Kane's collections are yet among the richest ever brought by arctic and polar explorers. They not only afford a great accession to our previous knowledge of the polar vegetation, but they, almost, complete the flora of northern Greenland, by adding 27 new species to the 49 allotted by Sir J. Richardson, in his statistical tables, to the polar section of that vast island, from the 73d parallel.

They, moreover, develop facts of great importance in a physico-geographical point of view: first, by exhibiting throughout the range of coasts between the arctic and polar circle no perceptible change in the number and species of plants therein collected; which seems to establish that the third or polar zone of Sir J. Richardson, as far at least as Greenland is concerned, might as well begin at the 67th as at the 73d degree of north latitude. Secondly: By the reappearance, beyond the limits of Smith's sound, of two plants, *Hesperis Pallasii* and *Vesicaria Arctica*, belonging rather to the milder parts of the arctic zone. Both these plants were gathered, with a few

others, on the newly discovered lands of Washington and Humboldt, on the very verge of that mysterious polar sea which Dr. Kane's expedition had the chance to espy and ascertain to be free from ice as far as the eye could reach. Such a fact, indeed, although limited to two species, seems to indicate the existence of peculiar isothermal influences, depending either on warm currents, greater depth of water, or actual depression of our globe at its poles.

Another remarkable feature of Dr. Kane's collections is: That, dividing into two equal parts the extent of coast, explored by him, and each section presenting about the same number of stations at which herborizations were made—the northern section, from Uppernavik,  $73^{\circ}$ , to Washington land, has yielded more dicotyledonous; but fewer monocotyledonous species than the southern section from Fiske Fiord to  $73^{\circ}$  north parallel.

These unexpected results show that the polar zone cannot, properly, be compared with the alpine regions of the more temperate climates. The uninterrupted action of light and heat, during the whole period between the rising and setting of the sun, which make the day or summer season of the poles; a purer and damper atmosphere, aided perhaps by a greater accumulation of electric fluid, must, necessarily, and more promptly (in the lowest levels) actuate and perfect the vegetation, not only of the plants already inured to those hyperborean regions; but also of those the seeds of which may have been transported either from milder climates, by currents, migration of birds, or otherwise. Unlike the snow-capped and barren summits of alpine regions, at all times destitute of verdure, it is probable that vegetation is permitted to extend to the very pole itself, wherever it meets with proper soil, favourable solar exposure and protection from the blasts of winds.

Dr. Kane also made some remarks upon the flora of the polar zones, considered in relation to temperature. The farthest northern point visited by him produced plants as abundant in number as those of the botanical region of Lancaster sound.

Prof. Haldeman called the attention of the Society to a recent publication by Professor Lepsius, of Berlin, on the sound of the human voice,—and noticed certain sounds in which he thinks Professor Lepsius has not been accurate in the exponents used to indicate them.

Dr. Kane mentioned that the corrections of the observations

upon temperature made during his late expedition to the polar regions, have been recently completed, and result in giving a considerably lower mean temperature than was stated by him in a previous communication to the Society.

A discussion ensued upon the imperfections of thermometers and their want of reliability when used to indicate extremes of temperature, whatever may be their form of construction, or the fluid with which their tubes are filled.

On motion of Dr. F. Bache, Dr. C. W. Short was excused from the duty of preparing an obituary notice of the late Mr. William Short.

The Society proceeded to ballot for candidates for membership,—and the ballot-boxes being afterwards opened by the presiding officer, the following named gentlemen were declared to be duly elected members of the Society:—

THEO. LACORDAIRE, of Liège.

DR. HERMAN BURMEISTER, of Hallé.

SAMUEL L. HOLLINGSWORTH, M.D., of Philadelphia.

CHRISTIAN OLRICK, of Denmark.

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*Stated Meeting, May 2.*

Present, nine members.

Dr. DUNGLISON, Vice-President, in the Chair.

Letters were read:—

From Dr. Samuel L. Hollingsworth, dated Philadelphia, April 21, 1856, acknowledging the receipt of notice of his election as a member of this Society: and—

From J. A. Thomas, Assistant Secretary, dated Department of State, Washington, April 19, 1856, announcing a donation for the library.

The following donations were announced:—

FOR THE LIBRARY.

Executive Documents, 2d Session of 33d Congress, 1854-5,	22 vols.
Senate Documents,	14 vols.
Senate, Miscellaneous,	3 vols.